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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,553	11/05/2003	Ayako Uji	01272.020640.	1053

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EXAMINER

MRUK, GEOFFREY S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 12/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/700,553

Applicant(s)

UJI ET AL.

Examiner

Geoffrey Mruk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5 and 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, and 6 rejected under 35 U.S.C. 102(b) as being anticipated by Bohorquez et al. (US 5,736,995).

With respect to claim 1, Bohorquez discloses an inkjet recording apparatus for performing recording by ejecting ink onto a recording medium (Column 1, lines 38-45) using a plurality of element substrates (Column 1, lines 55-57 i.e. printhead), the apparatus comprising:

- said element substrates, each having plurality of heating means to eject the ink (Fig. 1, element 38);
- a common support member (Fig. 3, element 40) on which said plurality of element substrates are arranged (Column 6, line 31), said common support member conducting heat among said element substrates (Column 4, lines 46-50);
- obtaining means (Fig. 3, element 22) for obtaining temperature of a printing head including said common support member and said plurality of element substrates (Column 4, lines 39-50);

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- recording mode setting means (Fig. 1, element 32; Fig. 4B, Print Data) for setting an element substrate that is to be used for recording and an element substrate that is not to be used for recording (Column 3, lines 4-10 i.e. parallel with printing pulses), from among said plurality of element substrates; and
- control means for heating (Column 3, line 7 i.e. additional electronics), if the obtained temperature of the printing head is in a predetermined range (Column 4, lines 51-59), only the element substrate that is set by said recording mode setting means to be not used (Column 3, line 8 i.e. print element heater) for recording to adjust the temperature of the element substrate to be used for recording utilizing heat conduction (Column 3, lines 4-10 i.e. parallel with printing pulses).

The examiner makes of record that Bohorquez discloses temperature control of thermal inkjet printheads where "Heating during the printing swath has been tried by adding additional heating elements or additional electronics to energize the print element heaters in parallel with the printing pulses. This method adds to the cost and complexity of the control and power electronics" (Column 3, lines 6-10). Although this method is not preferred by Bohorquez, "it has been tried" (Column 3, line 6).

With respect to claim 2, Bohorquez discloses said control means (Column 3, line 7 i.e. additional electronics) causes the heating means for the element substrate that is not to be used (Column 3, line 8 i.e. print element heater) for recording to generate heat such that the ink is not ejected from the element substrate (Column 3, lines 4-10 i.e. parallel with printing pulses).

With respect to claim 3, Bohorquez discloses said control means (Column 3, line 7 i.e. additional electronics) causes heating of the element substrate that is not to be used (Column 3, line 8 i.e. print element heater) for recording while the element substrate to be used for recording performs recording (Column 3, lines 4-10 i.e. parallel with printing pulses).

With respect to claim 5, Bohorquez discloses an inkjet recording apparatus for performing recording by ejecting ink onto a recording medium (Column 1, lines 38-45) using a plurality of element substrates (Column 1, lines 55-57 i.e. printhead), the apparatus comprising:

- said element substrates, each having a plurality of heating means to eject the ink (Fig. 1, element 38);
- a common support member (Fig. 3, element 40) on which said plurality of element substrates are arranged (Column 6, line 31), said common support member conducting heat among said element substrates (Column 4, lines 46-50);
- obtaining means (Fig. 3, element 22) for obtaining temperature of a printing head including said common support member and said plurality of element substrates (Column 4, lines 39-50);
- discrimination means (Fig. 1, element 32; Fig. 4B, Print Data) for discriminating between an element substrate that is to be used and an element substrate that is not to be used for the next recording to be performed (Column 3, lines 4-10 i.e. parallel with printing pulses); and

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- control means (Column 3, line 7 i.e. additional electronics) for heating, if the obtained temperature of the printing head is in a predetermined range (Column 4, lines 51-59), only the element substrate that is discriminated by said discrimination means to be not used (Column 3, line 8 i.e. print element heater) before the element substrate discriminated to be used for recording starts a recording operation, to adjust the temperature of the element substrate to be used utilizing heat conduction (Column 3, lines 4-10 i.e. parallel with printing pulses).

With respect to claim 6, Bohorquez discloses a heater for heating provided independently of the heating means is used as said control means (Column 3, lines 4-10 i.e. parallel with printing pulses).

### ***Response to Arguments***

Applicant's arguments with respect to claim 1-3 and 5-6 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is 571 272-2810. The examiner can normally be reached on 7am - 330pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GSM  
12/8/2006



 12/8/06  
MANISH S. SHAH  
PRIMARY EXAMINER